

Amendment and Response

Applicant: Werner Ertle et al.

Serial No.: 10/522,502

Filed: November 11, 2005

Docket No.: I431.124.101/FIN404PCT/US

Title: SEMICONDUCTOR WAFER WITH ELECTRICALLY CONNECTED CONTACT AND TEST AREAS

REMARKS

The following remarks are made in response to the Non-Final Office Action mailed February 24, 2010. Claims 34-37 have been withdrawn from consideration. Claims 1-17, 20-21 and 40 have been cancelled. Claims 18, 19, 22-33, 38, 39, and 41-44 were rejected. With this Response, claims 18, 38 and 43 have been amended. Claims 18, 19, 22-33, 38, 39, and 41-44 remain pending in the application and are presented for reconsideration and allowance.

Drawings

The Office Action objected to the drawings regarding the sealed areas recited in claims 18, 28, 38 and 39. A replacement drawing sheet is included with an amended Figure 2, which includes a sealed test area. The specification has been amended to make it consistent with the amended drawing figure.

Claim Rejections under 35 U.S.C. § 112

Claim 39 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Applicants believe the Examiner intended to refer to claim 38 with this rejection, since claim 39 recites “the test areas are sealed and the contact areas are not sealed.” Claim 38 has been amended to also recite “the test areas are sealed and the contact areas are not sealed,” thus overcoming the rejection.

Claims 43 and 44 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claim 43 has been amended to recite the test area being sealed. The specification at p. 7, ll. 23-25 describes the sealing the test areas using a patterned photo resist.

Claims 18, 19, 22-27, and 41-44 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18 has been amended to remove the recitation regarding the test areas being exposed. Thus, claim 18 only refers to the test areas being sealed, and therefore, *completely* sealed.

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Claim 38 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 38 has been amended to recite “the test areas are sealed and the contact areas are not sealed,” thus overcoming the rejection.

Claims 43 and 44 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 18, upon which claims 43 and 44 depend, has been amended to remove the reference to the test areas being exposed.

Applicants thus believe all of the rejections under section 112 have been overcome.

Claim Rejections under 35 U.S.C. § 103

Claims 18, 26, 27, and 41-44 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Kim et al. (US 6,159,826, “Kim”) in view of Strauss (US 5,719,449, “Strauss”). Applicants respectfully traverse these rejections.

As noted in the remarks above concerning the rejections under 35 U.S.C. 112, claim 18 has been amended to remove the reference to test areas being exposed. Thus, the test areas are only recited as being sealed. A relevant dictionary definition of the term *seal* is “to close or make secure against access, leakage, or passage by a fastening or coating.” <http://www.merriam-webster.com/dictionary/seal>. It is thus unreasonable (in light of the removal of the recitation of the test areas being exposed) to interpret a *sealed* item as being *partially sealed*, since if only partially sealed it is not really sealed at all.

The Office Action he cites figure 5, the test area 56a and the layer 57 of Kim as disclosing relevant features of claim 18. However, claim only recites the test areas as being sealed. Thus, the test areas are not partially sealed, but rather, completely sealed. sealed. Therefore, a combination of the Kim and Strauss references fails to disclose all of the features of the amended claims so that the Office Action fails to establish a *prima facie* case of obviousness.

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Moreover, the Office Action alleges it would be obvious to modify the device of Kim so as to form the through contacts directly below the conduction web as taught by Strauss since it has been held that rearranging parts of a prior art structure involves only routine skill in the art. The Office Action further asserts that one would have been motivated to form the through contact directly below the conduction web in order to avoid damage to through hole from the formation of a contact on the contact pad.

However, the Examiner has not cited any references in support of this assertion. Furthermore, this assertion would appear to have been made with knowledge of the invention and in particular based on the knowledge of the disclosure on page 5, lines 4 to 8 of the description. By separating one or more elements into disjointed pieces, the Examiner has taken the claimed limitations out of context and appears to be, at best, employing improper hindsight. “A fact finder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *KSR*, 127 S. Ct. at 1739 [82 USPQ2d at 1397] (citing to *Graham v. John Deere*, 383 U.S. 1 [148 USPQ 459] (1966)).

Therefore, Applicants respectfully submit that claim 18 is allowable over the combination of Kim and Strauss. Claims 26, 27 and 41-44 depend on claim 18 and are thus allowable for at least the same reasons.

Claims 28, 38, and 39 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Strauss and in view of Takemae et al. (US 4,744,061). Applicants respectfully traverse these rejections.

As in claim 18, each of these claims recites sealed test areas. The Office Action cites to a portion of Kim that only discloses a partially sealed item. As such, the Office Action fails to identify each claim element and therefore fails to establish *prima facie* obviousness. Further, these claims each recite the through contacts extending through a portion of the insulating layer directly below the conduction web, similarly to claim 18. As such, the same analysis set forth above with regards to claim 18 applies.

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As such, the Office Action fails to establish prima facie obviousness of claims 28, 29 and 39.

Claims 19 and 22-25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Strauss as applied to claims 18 and 28 above, and further in view of Henson (US 6,133,054, prior art of record). Claims 29-33 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of Strauss and Takamae as applied to claim 28 above, and further in view of Henson. These claims all depend on claim 18 or claim 28. Therefore, they are allowable for at least the same reasons.

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CONCLUSION

In view of the above, Applicant respectfully submits that pending claims are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims are respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

Please consider this a Petition for Extension of Time for a sufficient number of months to enter these papers, if appropriate. At any time during the pendency of this application, please charge any additional fees or credit overpayment to Deposit Account No. 500471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Mark L. Gleason at Telephone No. (612) 767-2503, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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